

Amendments to the Specification:

Please replace the paragraph beginning on page 11, line 6 with the following amended paragraph below:

Alternatively, further optimization may be implemented through a process of profile-driven optimization. The task-specific code generation system for speech recognition determines whether to perform optimization on the decoder program (step 415). If the task-specific code generation system for speech recognition determines to perform optimization on the decoder program, the decoder program is run in profiler 420. Speech data 422 that is representative of the speech that the system will encounter in normal use may be collected. The decoder program is run in profiler 420 with sample speech data 422. The results are analyzed by code re-organization module 424, which re-arranges the code and re-assigns memory locations to improve the expected performance. The task-specific code generation system for speech recognition determines whether the optimization of the decoder program is complete (step 426). If the task-specific code generation system for speech recognition determines that the optimization of the decoder program is not complete, the [[The]] output code is then [[feed]] fed back into compiler module 412 and this process may repeat until decoder program 414 is optimized. If the task-specific code generation system for speech recognition determines that the optimization of the decoder program is complete, the process terminates. Returning to step 415, if the task-specific code generation system for speech recognition determines not to perform optimization on the decoder program, the process terminates.